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a bladder disposed in said second chamber;

a reactant disposed in said bladder, said reactant being
capable of reacting with said hydrogen-containing
material to cause release of hydrogen;

a discharge conduit extending from said first chamber for
release of hydrogen from said first chamber;

a transfer conduit interconnecting said bladder and said
first chamber for flowing said reactant from said
bladder to said first chamber;

a check valve mounted in said transfer conduit and operable
to open upon decrease in pressure in said first chamber
from a selected pressure and operable to close upon the
pressure in said first chamber rising to the selected
pressure;

a spring acting upon said bladder in said second chamber to
maintain said reactant at the selected pressure;

wherein upon opening of said check valve the reactant in said
bladder is urged by said spring to flow through said
transfer conduit into said first chamber to react with

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the hydrogen-containing material to release hydrogen until the selected pressure in said first chamber is restored, thereby to close said check valve and to stop the flow of reactant material into said first chamber.

24. The hydrogen fuel source in accordance with claim 23 and comprising a housing, said first and second chambers being disposed in said housing.

25. The hydrogen fuel source in accordance with claim 24 wherein said second chamber is adjacent said first chamber.

26. The hydrogen fuel source in accordance with claim 23 wherein said hydrogen-containing material comprises a metal hydride.

27. The hydrogen fuel source in accordance with claim 26 wherein said reactant is water.

28. The hydrogen fuel source in accordance with claim 23 wherein said hydrogen-containing material comprises aluminum foil coated with a hydride composite.

29. The hydrogen fuel source in accordance with claim 28 wherein said hydride composite comprises a polymer bonded hydride composite.

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30. The hydrogen fuel source in accordance with claim 28 wherein said reactant is water.

31. The hydrogen fuel source in accordance with claim 23 wherein said hydrogen-containing material comprises a polymer-bonded metal hydride and aluminum in powder form.

32. The hydrogen fuel source in accordance with claim 31 wherein said reactant is water.

33. The hydrogen fuel source in accordance with claim 23 wherein said hydrogen-containing material comprises a lithium hydride slurry.

34. The hydrogen fuel source in accordance with claim 33 wherein said hydrogen-containing material comprises lithium hydride slurry in oil.

35. The hydrogen fuel source in accordance with claim 26 wherein said metal hydride is disposed in a coiled ribbon of glass cloth.

36. The hydrogen fuel source in accordance with claim 26 wherein said hydrogen-containing material comprises a coiled ribbon of glass cloth and the metal hydride coiled with said ribbon.

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37. The hydrogen fuel source in accordance with claim 23 and comprising first and second housings interconnectable to each other, said first chamber being disposed in said first housing and said second chamber being disposed in said second housing.

38. The hydrogen fuel source in accordance with claim 26 wherein said metal hydride comprises a metal hydride selected from a group of metal hydrides consisting of a dual metal hydride, lithium hydride, lithium aluminum hydride, calcium hydride, sodium hydride, magnesium hydride, Group IA metal hydrides, Group IIA metal hydrides, and complex hydrides including borohydrides of Group IA metals.

Respectfully,



Scott R. Foster, Esq.
Reg. No. 20,570
Pandiscio & Pandiscio
470 Totten Pond Road
Waltham, MA 02451

Date: 12/4/01

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